United States Environmental Protection Agency
POSITION DESCRIPTION COVERSHEET

DUTY LOCATION: Washington

2. POSITION NUMBER 19820

3. CLASSIFICATION ACTION: a. Reference of Series and Date of Standards Used to Classify this Position

	b. Title	c. Service	d. Series	e. Grade	f. CLC
Official Allocation	Environmental Engineer	GS	0819 ~~0303~~	14	

5. ORGANIZATIONAL TITLE OF POSITION (if any)

6. NAME OF EMPLOYEE

7. ORGANIZATION (give complete organizational breakdown)

a. U. S. ENVIRONMENTAL PROTECTION AGENCY

e.

c. Office of Environmental Assessment

g.

d. Immediate Office

h. EPAYS Organization Code: 91051006

EDBO 91057004

8. SUPERVISORY/MANAGERIAL DESIGNATION

__ [S] First or Second level supervisor: An individual who performs supervisory work and managerial responsibilities that require accomplishment of work through combined technical and administrative direction of others and meets the requirements for coverage as described in the General Schedule Supervisory Guide.

__ [A] An individual (as defined in Section 7103(a)(10) of Title V of the U.S. Code) who is authorized to hire, direct, assign, promote, reward, transfer, lay off, suspend, discipline, or remove one or more employees, or effectively recommend such action. The exercise of this responsibility is not routine or clerical in nature, but requires the consistent exercise of independent judgment.

__ [M] A manager who directs the work of an organization; is accountable for the success of line or staff programs; monitors, evaluates, and adjusts program activities; and performs the full range of duties outlined in the General Schedule Supervisory Guide. May also include deputies who fully share responsibility for managing the organization or who serve as an alter ego to the manager.

__ [B] A management official (as defined in Section 7103(a)(11) of Title V of the U.S. Code) who formulates, determines or influences an organization's policies. This means creating, establishing, or prescribing general principles, plans, or courses of action for an organization; or bringing about a course of action for the organization. Management officials must actively participate in shaping the organization's policies not just interpret laws and regulations give resource information or recommendations or serve as experts or highly trained professionals who implement or interpret the organization's policies and plans.

__ [T] ATeam Leader@ This position meets the requirements for coverage under Part II of the General Schedule Leader Grade Evaluation Guide.

_x_ [N] None of the above applies. This is a non-supervisory/non-managerial position.

9. SUPERVISORY CERTIFICATION I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships and that the position is necessary to carry out governmental functions for which I am responsible. The certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds, and that false or misleading statements may constitute violations of such statutes or their implementing regulations.

a. Typed Name and Title of Immediate Supervisor, Ann Williamson		d. Typed Name and Title of Second-Level Supervisor, Joyce Kelly, Director, Office of Environmental Assessment	
b. Signature Ann Williamson	c. Date 1/7/08	e. Signature Joyce C Kelly	f. Date 1-7-08

10. OFFICIAL CLASSIFICATION CERTIFICATION

A x this position has no promotion potential. ~ If position develops as planned and employee progresses satisfactorily, this position has known promotion potential to grade:	b. Fair Labor Standards Act ~ Nonexempt x Exempt	c. Functional Code

d. Bargaining Unit Code 0095	e. Check, if applicable: ~ Medical Monitoring Required ~ Extramural Resources Management Duties (___% of time) ~ This position is subject to random drug testing (___)	f. Signature	g. Date 1-8-08

11. REMARKS:

Applied OPM JFS for Professional Work in the Engineering & Architecture Group, GS-800, 11/08

Environmental Engineer GS 0819 14

Description of the work

This position is a national level expert in quantitative water quality modeling and assessment in the Office of Environmental Assessment, Immediate Office. This position is critical to the agency's mission of environmental protection and provides critical master level expertise to a high priority regional and national program. This expertise is utilized in several agency programs, including the water and Superfund programs, in establishing the scientific basis for regulatory decisions related to water quality protection and restoration. The incumbent provides a leadership function in strategizing, developing, communicating, and coordinating the water quality modeling and assessment work necessary to make defensible regulatory decisions. The incumbent is the principal advisor to executives and senior leadership on water quality modeling and assessment.

Water quality models are developed in a process that includes quality assurance planning, model selection, evaluation, documentation, and peer review. Once a model has been accepted for use in regulatory decision making, it is applied to the regulatory problem at hand. Throughout the development and application of the model, the modeler communicates the capabilities and limitations of the model to program staff. Particularly important is the communication of the uncertainty of model inputs and outputs.

The work of this position includes both direct hands-on model development and peer review of models developed by outside parties, including states, tribes, consultants, and universities. The work also includes collaboration with modelers in the region (states, tribes, federal agencies) working on models for regulatory purposes to ensure that models are evaluated, documented, and peer-reviewed.

The expertise under this position includes a broad understanding of the relationship between the technical work and the legal, technical, and policy landscape of a particular project. The incumbent is versed in the specific needs of the programs. Using this expertise, the incumbent provides program staff with critical information about the state of the science, scientific uncertainties, lessons learned, similarities to other projects, efficiencies, and potential strategies for completing and interpreting the technical work. The incumbent also provides high quality, credible presentations of the technical work inside and outside the agency in support of the program action. The incumbent anticipates potential problems and communicates with all appropriate EPA team members and stakeholders. Finally, the incumbent works closely and effectively with legal counsel in cases where the agency's technical work is challenged.

The incumbent's duties in this position will also provide an independent source of assessment information that may affect the priorities of the program offices with respect

to water quality protection. Once communicated to program managers, this information may lead to improved cross-program coordination, identification of previously unknown water quality problems, and identification of previously unknown (or previously under-estimated) sources of pollution. Using strong communication and team orientation, the incumbent is capable of significantly influencing project management in a positive manner.

MAJOR DUTIES

1. The incumbent will act as the expert regional senior scientist for quantitative water quality modeling and assessment. In this role he/she will advise other staff, senior managers, HQ, agency partners, and the general public on all matters pertaining to quantitative water quality modeling and assessment. Recommendations will influence and impact agency positions on significant, controversial projects. 30%

2. The incumbent will complete in-house quantitative water quality modeling and assessments for analysis of risks to human health and the environment to support EPA programs including water, ecosystems, and hazardous waste. The incumbent will conduct in-depth analysis and evaluations of highly complex water quality problems using a wide range of assessment tools and scientific methods. Incumbent's products and outcomes influence and impact policy, programs and guidance of national significance. Results and recommendations will be documented in peer-reviewed written reports and oral presentations and may prompt the development of new or improved approaches or criteria. 30%

3. The incumbent will review and comment on project plans and products generated by other EPA staff and external parties (e.g., states, tribes, local governments, industries) to ensure that the quantitative water quality modeling and assessment products are in keeping with programmatic (i.e. TMDLs, NPDES, Superfund, ECO) goals and priorities. Reviews require extensive probing and analysis and contacts and negotiations with high ranking representatives from external groups. Recommendations will influence and impact agency positions on significant, controversial projects. 30%

4. The incumbent acts as a national leader in the field not only for EPA but also in collaboration with other organizations. The incumbent will serve or lead EPA or other government agency workgroups, foster peer review of assessment products, assist in planning and organizing of training opportunities, and foster linkages between the assessment work in Region 10 to national research and development activities. 10%

Knowledge required by the Position 1-8 1550 points

1. Expert knowledge, skills, and ability in engineering, systems analysis, statistics, and quantitative assessment with an emphasis on water quality modeling.

2. Mastery of program principles, concepts, practices, methods, and techniques to apply new developments and theories to major water quality problems not susceptible to treatment by accepted methods.

3. Expert knowledge of Federal, State, and local laws and regulations, sufficient to make decisions or recommendations significantly changing, interpreting, or expanding important agency national policies and programs.

4. Expert knowledge of chemical, physical, and biological characteristics of aquatic ecosystems.

5. Expert knowledge and mastery of environmental modeling techniques including mathematical methods of simulating surface water hydrology and hydraulics and fate and transport of toxic, biological, and conservative/non- conservative pollutants in the aquatic environment.

6. Ability to develop and utilize advanced computer programs for the analysis of environmental data.

7. Ability to apply statistical methods in environmental assessments.

6. Expert knowledge, experience, and ability to communicate technical information in an effective manner at multiple levels, ranging from written reports to be peer-reviewed by scientists, briefing presentations to project managers and decision makers, and presentations to the general public.

7 Ability to work and communicate effectively in a team environment.

8. Expert knowledge, experience, and ability to convene and organize other experts in efforts to improve the science on a specific project and/or further the science in the Region.

SUPERVISORY CONTROLS-2 -5 650 points

The supervisor provides guidance solely in the form of general legislative, mission, or policy directions and resource constraints. The engineer and/or scientist typically initiates new projects or activities independently and keeps the supervisor informed of progress in planning, coordinating, and implementing the work and resolving conflicts. Recommendations and decisions of the engineer and/or scientist are accepted as technically sound even though final approval may depend on formal action by high-level

management. The engineer and/or scientist has the highest degree of independence in seeking optimum technical or policy solutions to problems in the light of current scientific and/or engineering developments. Completed work is broadly reviewed for adherence to mission or legislative direction and for assurance that broad policy or program objectives are fulfilled.

The employee determines work approaches to be taken and the technical methodology to be used. The supervisor is kept informed of potentially controversial matters. Completed work is reviewed only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results.

GUIDELINES--3-5 650 points

Guidelines are basic legislation and/or broadly stated agency regulations and policy statements. At this level the engineer and/or scientist is a recognized technical authority in the interpretation of such broad guidelines, and must exercise considerable judgment and ingenuity in interpreting and adapting guides that exist; in developing new and improved hypotheses, concepts, or approaches not previously tested or reports; and/or in developing new policies that have the potential to take the organization (and the affected public) in new directions. The ideas, methods and procedures developed are on the cutting edge of technology and often serve as precedents for other engineers and/or scientists, or policy makers within or outside of the agency.

COMPLEXITY-4-5 325 points

Assignments are of such breadth, diversity, and intensity that they involved many varied and complex features, and typically contain a combination of complex features that involve serious or difficult to resolve conflict between engineering and/or scientific and management requirements. The work requires originating innovative scientific and/or engineering techniques, establishing criteria and standards applicable to wide range of scientific and/or engineering problems and conditions, or developing new scientific concepts or approaches that advance the state-of-the-science.

Assignments are diverse and require different and unrelated methods or approaches. Decisions regarding accomplishment of the work are complicated by uncertainty regarding approach, methodology, interpretation and evaluation. Such uncertainty results from continuing changes in program, technological developments, novel factors or conflicting requirements. The work requires originating new techniques, establishing criteria, or developing new information.

The nature of the work is to maintain the technical integrity of the process related to implementing water quality goals. In particular, the process of translating water quality standards into TMDL/WLAs which define the basis of water quality-based pollution

control is of concern. This process certainly has a technical component to it which calls for integration and adaptation of principles from numerous scientific disciplines (e.g. hydrology, biology, chemistry, toxicology, meteorology, mathematics) to solve problems related to water quality protection. The other component involves understanding the economic and political aspects related to Wasteload Allocation negotiations.

SCOPE AND EFFECT-5-5 325 points

The work includes that resolution of a broad range of critical or highly unusual engineering and/or scientific problems, development of innovative approaches or guides, or the determination of the effectiveness and validity of proposed or current policies and programs. The engineer and/or scientist serves as an expert advisor and consultant to officials and managers within or outside the agency on a broad range of engineering and/or scientific activities and broad policy issues.

PERSONAL CONTACTS- 6-3 60 points

Personal contacts include a wider range of professional and administrative personnel throughout the agency, at other federal agencies, in state or local government, private industry, academia, environmental advocacy groups, and in some cases the media and elected officials.

PURPOSE OF CONTACTS-7-~~4~~ ~~220~~ 3 120 points

The purpose of contacts is to justify, defend, negotiate, or settle controversial and far-reaching matters through active participation in conferences, meetings or presentations. The persons contacts typically have diverse viewpoints, goals, or objectives, requiring the engineer and/or scientist to achieve a common understanding of the problems and a satisfactory solution by convincing others, arriving at a compromise, or developing suitable alternatives.

PHYSICAL DEMANDS 8-1—5 Points

The work is primarily sedentary in an office setting, although walking, bending, or lifting may be required during field work.

WORK ENVIRONMENT-9-1—5 Points

The work environment involves everyday risks or discomforts that require normal safety precautions typical of such places as offices, training rooms, and libraries. The work area is adequately lighted, heated, and ventilated. There may be occasional exposure to moderate risks or discomforts in storage areas or hazardous waste sites.

TOTAL POINTS = 3790

Total Points = 3,790: GS-14 (GS-14=3605-4050)

Final Recommendation: Environmental Engineer GS 0819 14

[redacted]

December 11, 2007